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Review of *What Things Do* by Peter-Paul Verbeek (The Pennsylvania University Press, ISBN 0-271-02540-9)

*What Things Do* is an important contribution to philosophy of technology. Peter-Paul Verbeek has undertaken the challenge of linking this field to current technology studies, with promising results. The main figures on whom he focuses are Martin Heidegger, Don Ihde, and Bruno Latour. His account of their thought is lucid and convincing. The synthesis at which he aims offers a starting point rather than a destination, but it is a useful starting point from which to develop and deepen work in philosophy of technology.

Verbeek begins by distinguishing between a focus on the condition of possibility of technology and the meaning of technologies in the social world. The condition of possibility is the dominating attitude that exposes things to manipulation and control. While technologies presuppose such an attitude, they may be designed to perform all sorts of tasks that have nothing to do with domination and may take on very different meanings in

their social context.  The classical philosophy of technology assumed the identity of these two dimensions of technology and so arrived at a negative view of technology and indeed of modernity as a whole. This is especially clear in the later Heidegger who interprets the technological age as dedicated to total domination.

The “backward thinking” that confounds the concrete technical object with the conditions of its possibility shows up in various ways in classical philosophy of technology. Verbeek points out that Karl Jaspers identifies the role of mass produced objects in social life with their origin in a standardized process oriented toward function and hence concludes that standardization and functionalization characterize modernity as such. This is a “category mistake” we can avoid by distinguishing the origin from the experience of technologies through a “forward thinking” that analyzes how technologies shape and participate in a way of life. From that standpoint we discover not technological domination but the existential potentials opened by technology as it mediates our capacities as human beings.

Martin Heidegger makes a similar mistake, arguing that the nature of the technological revealing is reflected in the specific technologies we employ in modern societies. Since the technological revealing is described by Heidegger as reducing things to raw materials and system components, concrete technologies must exemplify these attributes and only these attributes. But this arbitrarily restricts the meaning of technologies to their conditions of possibility, or rather to those few conditions Heidegger has

identified.

Verbeek therefore rejects a transcendental theory of the essence of technology. The concrete sociological and historical study of technology paints a much more varied picture of modern life and the artifacts that make it possible. This has become especially clear in recent years as constructivist technology studies have introduced new methods for explaining the social dimensions of technology. Case studies applying these methods show the futility of opposing the social and the technical as though the one could be discussed meaningfully without the other. Don Ihde's hermeneutic approach to technology also brings out the concrete materiality of the things in context and blocks any totalizing view of the "essence" of technology.

Verbeek contrasts the essentialist views of the later Heidegger with the analysis of worldhood in *Being and Time*. In that earlier work, Heidegger showed how tools give rise to meanings and contribute to shaping a world in mediating human action. These meanings are specific to the context of action and not a transcendental framework such as the *Gestell* of Heidegger's post-war writings. This is a promising starting point for a hermeneutic phenomenology of technology that addresses the concrete meaning of things.

The second part of Verbeek's book develops this approach under the provocative label of "postphenomenology." This is Don Ihde's term for a variant of phenomenology without transcendental pretensions. As Verbeek

defines it, it is a relational ontology in which humans and things, subjects and objects constitute each other. Verbeek claims that his postphenomenological approach can preserve the existential concerns of classical philosophy of technology while also incorporating technology studies' notion of the co-construction of society and technology.

Verbeek follows Ihde closely in describing the "intentionality" of technologies as the ways in which they mediate perception and action. The "I-world relation" always includes technical elements that shape both subject and object. Verbeek summarizes Ihde's account of this relation, which can take several different forms, analyzable at the micro level of perception and the macro level of culture. He concurs with Ihde that technologies are what they are only in a social context and that they therefore have no essence "in themselves." But at the same time, what it is to be human is also contextually determined and technologies play a role in the cultural structures that shape human life.

*What Things Do* culminates in an attempt at a synthesis of this post-phenomenological approach and Bruno Latour's actor network theory. Latour's theory is also anti-essentialist and relationalist and so appears compatible with Ihde's version of phenomenology. Latour too argues that things are what they are only in a context, in this case the context of the network into which they have been incorporated. His postulate of the symmetry of humans and non-humans has the negative goal of blocking any recourse to pre-existing essences that would determine the network rather

than being co-constructed by it. Verbeek describes Latour's theory of mediation which explains how networks are constituted through actors' programs and how those programs are translated into the actions of the hybrids formed by humans and their tools.

Ihde focuses on the structure of experience while Latour focuses on action. Their approaches appear complementary. In both cases, Verbeek argues, the dichotomy of subject and object is overcome. However, there is a difference of emphasis. For Latour, networks bring subjects and objects into presence, while for Ihde the point of interest is the relation between them once constituted. Actor network theory concerns the constituting process, postphenomenology the experiencing of and by the constituted subjects and objects. The two facets are linked but not identical.

Verbeek's critical discussion of Albert Borgmann's philosophy of technology concludes with a model of the complementary contributions of actor network theory and post-phenomenology.

> From a hermeneutical perspective, artifacts mediate human experience by transforming perceptions and interpretive frameworks, helping to shape the way in which human beings encounter reality. The structure of this kind of mediation involves amplification and reduction; some interpretive possibilities are strengthened while others are weakened. From an existential perspective, artifacts mediate human existence by giving concrete shape to their behavior and the social contexts of their existence. This kind of mediation can

> be described in terms of translations, whose structure involves invitation and inhibition; some forms of involvement are fostered while others are discouraged. Both kinds of mediation , taken together, describe how artifacts help shape how humans can be present in the world and how the world be present for them. (p. 195)

Verbeek's synthesis is then applied to design theory in an interesting concluding section of his book on which I will not comment further, Instead, I would like to focus critically on the synthesis itself. Is it successful? Has Verbeek really solved the problem with which he begins and answered the question of what things do?

An initial problem concerns the distinction between classical and contemporary perspectives on technology. Verbeek argues that classical philosophy of technology's focus on the conditions of possibility of technology excludes its concrete social significance. The distinction involved here corresponds roughly with that between function and meaning. Without a functional approach to experience there can be no technology, but the experience of technology is not purely functional. On the contrary, functional objects acquire meanings that go beyond function. For example, houses have functions such as providing shelter but they are obviously not reducible to those functions. The same is true of automobiles and many other technical objects. The error of classical philosophy of technology is to perform this reduction theoretically, or rather, to accuse modern societies of performing it practically.

Verbeek claims this reductionist approach can be avoided by attention to the social level of meaning, his forward looking analysis. This is a persuasive critique but Verbeek does not follow out the path it opens very far. There are two problems I wish he had addressed.

First, I wonder why he does not consider the basic structures of meaning as “conditions of possibility” since on his account meaning is just as essential to technology as function. In fact, Verbeek has an implicit ontology in which function and meaning complement each other as fundamental, analytically distinguishable dimensions of technology. As he points out in his considerations on design, the mediating role of technologies is present *in* their functions and is not a separate sign attached to an independent functionality. For example, a speed bump not only functions to slow down traffic, it mediates the relation of users of the road and the space around it, *signifying* that space as a pedestrian terrain through making it safe.

Were Verbeek to analyze the transcendental conditions of meaning as well as function he would arrive at something resembling the two level instrumentalization theory I have proposed. In that theory the most general functional conditions of possibility of technology appear as historical constants while the conditions of realization vary much more widely. Those latter conditions have to do with the ethical and aesthetic meaning of technologies and the way of life they shape. These aspects of technology are broken down into categories that reappear in varying configurations in

different societies, but they do always appear and so can be properly considered essential conditions of possibility as well. The two levels are analytically distinguished, just as Verbeek's approach requires.

Second, the synthesis of Ihde and Latour is an attempt to defend a contextualist or relationalist ontology while also offering a theory of meaning. The methodological contributions of these two thinkers are more useful for the former goal than the latter. While Ihde and Latour have much to offer, I do not believe their approaches even begin to approximate the rich hermeneutical material routinely included in political and social-historical studies of technology. Ihde is primarily interested in the structure of the relations of subject and object in perception and while that provides him with an opening onto a far richer hermeneutic of technology, he rarely goes beyond brief sketches of what such a hermeneutic might entail. Latour is interested in how networks are constituted and in large part this is a question of power, but he avoids posing questions about the constitution and exercise of power by the economic classes and corporations that dominate modern social life. The rarefied air these thinkers breath is no doubt healthy but it is awfully thin.

Verbeek has written a book that is successful at presenting the essential ideas of a wide range of thinkers. And he surprises us with remarkable analyses of the convergences and complementarities of theories that one might consider incompatible at first sight. This synthetic ability is precious especially at this time in the history of philosophy of technology, as it

confronts the new challenges and opportunities of the maturing field of technology studies and the impact of the Internet on our general conception of technology. *What Things Do* is a prolegomena that calls for a more constructive statement in a successor volume. I look forward to that future contribution with anticipation.